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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/815,536 | 04/01/2004 | John M. Stropki JR. | LEEE 2 00358 | 1570 |
| 27885 | 7590 | 08/24/2006 | EXAMINER | |
| FAY, SHARPE, FAGAN, MINNICH & MCKEE, LLP 1100 SUPERIOR AVENUE, SEVENTH FLOOR CLEVELAND, OH 44114 | | | KERNs, KEVIN P | |
| | | ART UNIT | PAPER NUMBER | |
| | | 1725 | | |

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/815,536 | STROPKI ET AL. |
| | Examiner | Art Unit |
| | Kevin P. Kerns | 1725 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 31 July 2006.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 44-47 and 50 is/are pending in the application.
 4a) Of the above claim(s) 1-43 and 52-57 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 44-47 and 50 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 02 August 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 44-47 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over either GB 2 316 244 or Kikuchi et al. (US 5,250,786) in view of Baker (US 5,864,116), and further in view of DE 26 50 522 (complete translation provided with this Office Action).

GB 2 316 244 discloses a battery powered electric arc welder, in which the welder includes a welding station, with the welding station including the area adjacent electrodes (12,16) and workpiece W; a rechargeable battery 10 that supplies DC battery

voltage; means for recharging the battery (page 1, line 11) that is operable to be powered from an external AC power source, such as the mains, vehicle alternators/dYNAMOS, etc. (page 3, lines 8-10) by use of a connecting cable, or extension cord; a high switching speed converter coupled to the battery (transistor T having a switching frequency of 10kHz); and a controller (control circuit 14) coupled to the welder with a feedback circuit (page 1, lines 28-31) further coupled with the welding station (abstract; page 1, line 9 through page 4, line 22; and Figures 1 and 2).

Also, Kikuchi et al. disclose a DC arc welding apparatus, in which the apparatus includes a welding station, with the welding station including the area adjacent battery-driven welder 10, engine-driven welder 20, and associated electrodes and workpiece(s); a rechargeable battery 11 that supplies DC battery voltage; means for recharging the battery (charging device 19) that is operable to be powered from an external AC power source, such as an output terminal 206 of an alternator 201 (column 5, lines 32-39; and Figure 2) by use of a connecting cable, or extension cord; a high switching speed converter coupled to the battery (chopper control device 18 – column 5, lines 18-26; and Figure 2); and a controller (control circuit 105) coupled to the welder with a feedback circuit (column 6, lines 65-68; column 7, lines 1-6; column 8, lines 14-36; and Figure 4) further coupled with the welding station (abstract; column 1, lines 7-11; column 3, lines 30-64; column 4, line 48 through column 7, line 39; column 8, lines 14-36; column 11, lines 26-39; and Figures 1, 2, and 4).

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Neither GB 2 316 244 nor Kikuchi et al. specifically discloses that the high switching speed converter is a DC down chopper and that the battery and converter are movable on a wheeled carriage.

However, Baker discloses a DC chopper with inductance control for welding, in which the chopper 10 is a multi-stage DC down chopper for use in arc welding, such that the chopper includes a DC input source, 1st and 2nd switching stages, 1st and 2nd switch devices, and 1st and 2nd chokes, such that the DC down chopper is advantageous for providing a minimum current override feedback circuit, whereby the current in the welding operation never decreases below a given set current level, thus allowing the welding arc to remain stable (abstract; column 1, lines 4-8; column 2, line 37 through column 4, line 58; column 5, lines 45-67; column 6, lines 1-67; and Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to modify the battery powered electric arc welding devices, as disclosed individually by GB 2 316 244 and Kikuchi et al., by using a DC down chopper, as taught by Baker, in order to provide a minimum current override feedback circuit, whereby the current in the welding operation never decreases below a given set current level, thus allowing the welding arc to remain stable (Baker; abstract; column 3, lines 40-48; and column 4, lines 37-58).

Neither GB 2 316 244, Kikuchi et al., nor Baker specifically discloses that the battery and converter are movable on a wheeled carriage.

However, DE 26 50 522 discloses a rollable arc welding trolley for inert gas welding, in which the welding trolley includes mounted batteries that supply DC voltage,

such that the trolley further includes wheels, for the purpose of providing portability for the welder, while avoiding the requirement of mains electricity connection during welding, and no welding transformer (abstract; and Figures 1 and 2).

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to modify the battery powered electric arc welding devices, as disclosed individually by GB 2 316 244 and Kikuchi et al., by using a DC down chopper, as taught by Baker, in order to provide a minimum current override feedback circuit, whereby the current in the welding operation never decreases below a given set current level, thus allowing the welding arc to remain stable, and by further using a wheeled carriage for a DC voltage welder, as taught by DE 26 50 522, in order to provide portability for the welder, while avoiding the requirement of mains electricity connection during welding, and no welding transformer (DE 26 50 522; abstract).

Response to Arguments

4. The examiner acknowledges the applicants' amendment received by the USPTO on July 31, 2006. The amendments overcome prior specification objections and 35 USC 112, 2nd paragraph and 35 USC 102(b) rejections. A complete translation of DE 26 50 522 has been provided with this Office Action. Claims 1-43 and 52-57 remain withdrawn from consideration as drawn to non-elected inventions. The applicants have cancelled claims 48, 49, and 51. Claims 44-47 and 50 are currently under consideration in the application.

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5. Applicants' arguments filed July 31, 2006 have been fully considered but they are not persuasive.

With regard to the applicants' remarks/arguments on pages 13 and 14 of the amendment, in particular on page 14, the applicants' major argument is that the combination of references (which are all drawn to structure and/or circuitry of welding machines) does not establish a *prima facie* case of obviousness under 35 USC 103(a) due to improper hindsight analysis. The examiner respectfully disagrees, as the high switching speed converter (DC down chopper taught by Baker), as well as the battery and converter being movable on a wheeled carriage (DE 26 50 522), both include respective motivations to be combined with the primary references in above section 3 (also see sections 10 and 11 of the previous Office Action). These motivations are distinct and not simply "conclusory statements" as the applicants argue on page 14. Instead, the applicants have generally attacked the references individually, without substantial consideration regarding that one of ordinary skill in the welding art would use a high switching speed converter (Baker) and the battery and converter being movable on a wheeled carriage (DE 26 50 522). Furthermore, the applicants have not disputed in their arguments that these respective structural features taught by Baker and DE 26 50 522 fail to exist, and one of ordinary skill in the art would have been motivated to use these additional features for the above reasons.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon

hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571) 272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin P. Kerns *Kevin Kerns 8/22/06*
Primary Examiner
Art Unit 1725

XPK
kpk
August 22, 2006